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AGG 115

B A U S C H & L O M B I N C O R P O R A T E D

R O C H E S T E R , N E W Y O R K 1 4 6 0 2

July 1, 1965

CERTIFICATE OF INSPECTION

Contract No. 3602-5777-4 - Item No. 2.

Four(4) High Power Stereoviewer Optical Head Assemblies with Rigidized Base Plate (serial numbers 350UA through 353UA inclusive) have been inspected and found to be acceptable in accordance with the attached Instrument Check Sheets dated as follows:

Serial Number	Date
350UA	June 29, 1965
351UA	June 30, 1965
352UA	June 30, 1965
353UA	July 1, 1965

(Signed) [redacted] STAT

(Date) 1 JULY 1965

The above instruments have been inspected and are herein certified to be in accordance with the above referenced check sheets.

(Signed) [redacted] STAT

(Date) 7/1/65

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INSTRUMENT CHECK OUT DATE 6/29/65 6/30/65

HIGH POWER STEREO VIEWER COMPARATOR HEAD SERIAL NO. 350 UA

1. INTERPUPILLIARY DISTANCE

NOMINAL	ACTUAL
55 - 72 mm	54 - 73 mm

2. VERIFY OPERATION OF MECHANICAL CONTROLS

	ACCEPT	REJECT
A. ZOOM CONTROL KNOBS	✓	
B. PECHAN ROTATION	✓	
C. ANGLE TRANSFER SCALES	✓	
D. EYEPIECE INCLINATION CLAMP	✓	
E. EYEPIECE ROTATION	✓	
F. RETICLE RETRACTION	✓	
G. IPD LEVER	✓	
H. EYEPIECE FOCUS RINGS	✓	

COMMENTS:

3. EYEPIECE INCLINATION

NOMINAL	ACTUAL
30° ± 7.5°	18° - 51°

4. MAGNIFICATION

	NOMINAL	ACTUAL LEFT	ACTUAL RIGHT
B+L 10X EYEPIECES + B+L 10X OBJECTIVES	100X	106 X	107 X
	200X	214 X	218 X
B+L 6X OBJECTIVES	60X	64 X	65 X
	120X	128 X	132 X
B+L 3.5X OBJECTIVES	35X	36.2 X	37 X
	70X	74.5 X	76 X
WILD 10X EYEPIECES + 10X WILD OBJECTIVE	100X	106 X	106 X
	200X	214 X	217 X

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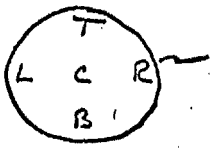
4. MAGNIFICATION (CONT)

	NOMINAL	ACTUAL LEFT	ACTUAL RIGHT
6X WILD OBJECTIVES	60X	65.0 X	65.4 X
	120X	131 X	132 X
3X WILD OBJECTIVES	30X	32.1 X	32.1 X
	60X	65.0 X	65.9 X

5. RESOLUTION (NO REFOCUSING)



FIELD TARGET NBS R0064
200 - 2000 l/mm

LEFT SIDE l/mm

B&L OPTICS	C	T	B	R	L
35X	280	200	200	200	<200
70X	280	250	220	200	200
60X	500	320	320	320	200
120X	500	400	400	500	220
100X	720	440	440	560	220
200X	900	720	640	640	640

RIGHT SIDE l/mm

	C	T	B	R	L
35X	280	200	200	<200	<200
70X	280	280	250	220	250
60X	500	400	320	320	220
120X	720	500	440	440	280
160X	800	440	440	360	360
200X	900	440	440	440	400

WILD OPTICS	C	T	B	R	L
30X	320	<200	<200	<200	<200
60X	360	280	250	220	250
60X	500	320	320	320	280
120X	800	440	360	320	320
100X	900	640	640	560	440
200X	1000	800	800	800	720

Serial #

	C	T	B	R	L
30X	320	<200	<200	<200	<200
60X	360	<200	<200	<200	<200
60X	640	320	320	280	280
120X	800	400	400	320	320
100X	1000	560	560	500	320
200X	1120	720	720	720	800

COMMENTS : 800
900
1000
1120

Both sagittal and tangential lines shown four

6. COMPENSATION FOR IMAGE ROTATION DUE TO EYEPIECE INCLINATION (SET AT 30°)

	LEFT SIDE		RIGHT SIDE	
22.5°	ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___
37.5°	ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___

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HPSV COMPARATOR HEAD SERIAL # 350 UA

7. COINCIDENCE OF RETICLE WITH IMAGERY THROUGH ZOOM RANGE
USE DIOPTER TELESCOPE (10X EYEPIECE) AND
LEFT + RIGHT

B+L	10X	OBJECTIVE	ACCEPT	✓	REJECT	
	6X	"	ACCEPT	✓	REJECT	
	3.5X	"	ACCEPT	✓	REJECT	
WILD	10X	"	ACCEPT	✓	REJECT	
	6X	"	ACCEPT	✓	REJECT	
	3X	"	ACCEPT	✓	REJECT	

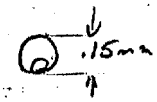
8. PECHAN ZERO SETTING

LEFT SIDE		RIGHT SIDE	
ACCEPT ✓	REJECT	ACCEPT ✓	REJECT

9. PECHAN RUNOUT IN EYEPIECE FOCAL PLANE (10X EYEPIECE)

		LEFT SIDE		RIGHT SIDE	
B+L	10X OBJ	.15	mm	10X OBJ .1	mm
	6X "	.15	mm	6X " .1	mm
	3.5X "	.15	mm	3.5X " .15	mm

RUNOUT LOOKS LIKE (SKETCH)



WILD	10X		mm	10X	mm
	6X		mm	6X	mm
	3.5X		mm	3.5X	mm

RUNOUT LOOKS LIKE (SKETCH)

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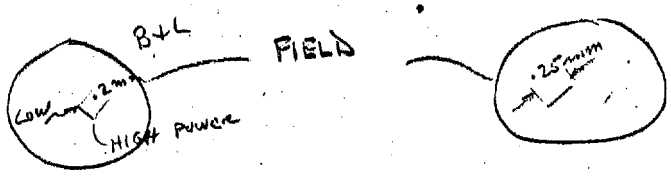
HPSU COMPARATOR HEAD SERIAL # 350 UA

10. ZOOM RUNOUT IN EYEPIECE FOCAL PLANE 100X – 200X

	LEFT SIDE	RIGHT SIDE
B&L	.2 mm	.25 mm
WILD	____ mm	____ mm

SKETCH RUNOUT



11. FIELD OF VIEW 10X EYEPIECES

		LEFT SIDE		RIGHT SIDE	
B&L	100X	1.8	mm	100X	1.8 mm
	200X	0.9	mm	200X	0.9 mm
	60X	2.98	mm	60X	2.95 mm
	120X	1.50	mm	120X	1.48 mm
	35X	5.30	mm	35X	5.25 mm
	70X	2.62	mm	70X	2.60 mm
WILD	100X	1.8	mm	100X	1.8 mm
	200X	0.9	mm	200X	0.9 mm
	60X	2.97	mm	60X	3.0 mm
	120X	1.48	mm	120X	1.50 mm
	30X	6.06	mm	30X	6.06 mm
	60X	3.0	mm	60X	3.0 mm

COMMENTS:

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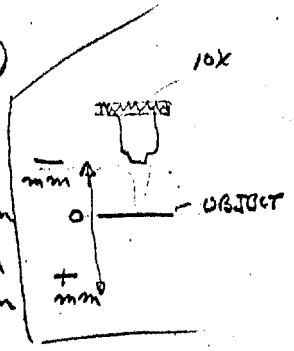
HPSU COMPARATOR HEAD SERIAL # 350 [illegible]A

12. PARFOCALITY OF OBJECTIVES (USE DIOPTER TELESCOPE)

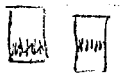


	LEFT SIDE (i.e. FOCUSED INITIALLY)		RIGHT SIDE	
B+L	10X OBJ.	0 mm	10X OBJ.	0 mm
	6X OBJ.	+20 mm	6X OBJ.	-14 mm
	3.5X OBJ.	+31 mm	3.5X OBJ.	-44 mm
WILD	10X OBJ.	0 mm	10X OBJ.	0 mm
	6X OBJ.	-111 mm	6X OBJ.	+24 mm
	3X OBJ.	104 mm	3X OBJ.	+66 mm

13. PARCENTRATION OF OBJECTIVES IN EYEPIECE FOCAL PLANE (ONLY THE WILD OBJECTIVES MADE PARCENTRAL)

	LEFT SIDE		RIGHT SIDE	
	10X OBJ.	CENTERED	10X OBJ.	CENTERED
WILD	6X OBJ.	.1 mm FROM CENTER	6X OBJ	.1 mm FROM CENTER
	3X OBJ.	.1 mm " "	3X OBJ.	.15 mm " "

14. DIFFERENCE IN EYEPIECE LENGTHS WHEN AT NOMINAL SETTING (USE DIOPTER TELESCOPE)



LEFT 144.5 mm
RIGHT 145 mm
DIFFERENCE .5 mm

15. POSITION OF RETICLE RELATIVE TO CENTER OF FIELD

(SKETCH)

(ZERO)

16. FOCUS RANGE OF EYEPIECES (NOMINAL SETTING AT WHITE RING OF EYEPIECE TUBE)

LEFT SIDE	RIGHT SIDE
+ at least 5 DIOPTERS	+ at least 5 DIOPTERS
- at least 5 DIOPTERS	- " " 5 DIOPTERS

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17. WEIGHT _____ POUNDS

18. EYE RELIEF (10X EYEPIECE + OBJECTIVES)

	LEFT SIDE	RIGHT SIDE
B+L	22 mm	21 mm
WILD	15 mm	15 mm

TESTS CONDUCTED BY

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INSTRUMENT CHECK OUT DATE [illegible]

HIGH POWER STEREO VIEWER COMPARATOR HEAD SERIAL NO. 351 UA

1. INTERPUPILLIARY DISTANCE

NOMINAL	ACTUAL
55 - 72 mm	54 - 73 mm

2. VERIFY OPERATION OF MECHANICAL CONTROLS

	ACCEPT	REJECT
A. ZOOM CONTROL KNOBS	✓	
B. PECHAN ROTATION	✓	
C. ANGLE TRANSFER SCALES	✓	
D. EYEPIECE INCLINATION CLAMP	✓	
E. EYEPIECE ROTATION	✓	
F. RETICLE RETRACTION	✓	
G. IPD LEVER	✓	
H. EYEPIECE FOCUS RINGS	✓	

COMMENTS:

3. EYEPIECE INCLINATION

NOMINAL	ACTUAL
30° ± 7.5°	20° - 50.5°

4. MAGNIFICATION

	NOMINAL	LEFT SIDE ACTUAL	RIGHT SIDE ACTUAL
B+L 10X EYEPIECES + B+L 10X OBJECTIVES	100X	105 X	104.5 X
	200X	212 X	211 X
B+L 6X OBJECTIVES	60X	X	X
	120X	X	X
B+L 3.5X OBJECTIVES	35X	X	X
	70X	X	X
WILD 10X EYEPIECES + 10X WILD OBJECTIVE	100X	106 X	106 X
	200X	214 X	213 X

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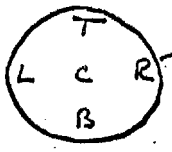
4. MAGNIFICATION (CONT)

	NOMINAL	LEFT ACTUAL	RIGHT ACTUAL
6X WILD OBJECTIVES	60X	62.6 X	63.8 X
	120X	125.5 X	129 X
3X WILD OBJECTIVES	30X	31.2 X	31.4 X
	60X	62.7 X	63.8 X

5. RESOLUTION (WITH NO REFOCUSING)



FIELD

TARGET NBS R0064 200 - 2000 l/mm

LEFT SIDE l/mm

B&L OPTICS	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	720	400	500	500	320
200X	800	500	500	500	500

RIGHT SIDE l/mm

	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	800	400	440	440	360
200X	900	500	560	640	560

Serial #	WILD OPTICS	C	T	B	R	L
11755	30X	280	<200	<200	<200	<200
	60X	360	<200	<200	<200	200
10972	60X	560	<200	<200	<200	220
	120X	800	360	320	280	220
103164	100X	900	560	560	560	640
	200X	1000	720	800	640	640

Serial #		C	T	B	R	L
11756	30X	320	<200	<200	<200	<200
	60X	360	<200	<200	<200	<200
10990	60X	700	320	320	280	280
	120X	800	360	320	280	280
103059	100X	1000	800	560	560	560
	200X	1129	800	800	800	800

COMMENTS :

4.5 – 900
5.0 – 1000
5.6 – 1120
6.3

Both sagittal + tangential lines sharp focus

6. COMPENSATION FOR IMAGE ROTATION DUE TO EYEPIECE INCLINATION (SET AT 30°)

	LEFT SIDE		RIGHT SIDE	
22.5°	ACCEPT ✓	REJECT ___	ACCEPT ___	REJECT ___
37.5°	ACCEPT ✓	REJECT ___	ACCEPT ___	REJECT ___

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HPSV COMPARATOR HEAD SERIAL # 61 UA

7. COINCIDENCE OF RETICLE WITH IMAGERY THROUGH ZOOM RANGE
USE DIOPTOR TELESCOPE 10X EYEPIECE AND
LEFT & RIGHT

B+L	10X	OBJECTIVE	ACCEPT ___	REJECT ___
	6X	"	ACCEPT ___	REJECT ___
	3.5X	"	ACCEPT ___	REJECT ___
WILD	10X	"	ACCEPT ✓	REJECT ___
	6X	"	ACCEPT ✓	REJECT ___
	3X	"	ACCEPT ✓	REJECT ___

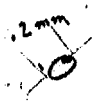
8. PECHAN ZERO SETTING

LEFT SIDE		RIGHT SIDE	
ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___

9. PECHAN RUNOUT IN EYEPIECE FOCAL PLANE 10X EYEPIECE

		LEFT SIDE	RIGHT SIDE
B+L	10X OBJ	.2 mm	10X OBJ .1 mm
	6X "	___ mm	6X " ___ mm
	3.5X "	___ mm	3.5X " ___ mm

RUNOUT LOOKS LIKE (SKETCH)



WILD	10X	___ mm	10X ___ mm
	6X	___ mm	6X ___ mm
	3.5X	___ mm	3.5X ___ mm

RUNOUT LOOKS LIKE (SKETCH)

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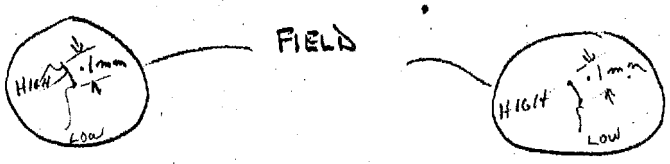
HPSU COMPARATOR HEAD SERIAL # 351 A

10. ZOOM RUNOUT IN EYEPIECE FOCAL PLANE 100X – 200X

	LEFT SIDE	RIGHT SIDE
B&L	.1 mm	.1 mm
WILD	mm	mm

SKETCH RUNOUT



11. FIELD OF VIEW 10X EYEPIECES

		LEFT SIDE	RIGHT SIDE
B&L	100X	1.80 mm	1.80 mm
	200X	0.91 mm	0.9 mm
	60X	mm	mm
	120X	mm	mm
	35X	mm	mm
	70X	mm	mm
WILD	100X	1.81 mm	1.83 mm
	200X	0.92 mm	0.93 mm
	60X	3.12 mm	3.02 mm
	120X	1.57 mm	1.51 mm
	30X	6.33 mm	6.22 mm
	60X	3.12 mm	3.08 mm

COMMENTS:

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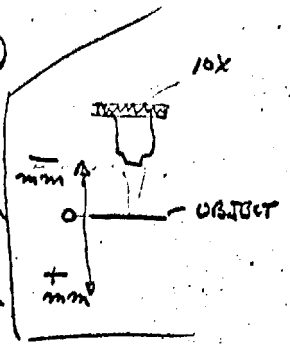
HRSU COMPARATOR HEAD SERIAL # 351

12. PARFOCALITY OF OBJECTIVES (USE DIOPTER TELESCOPE)

B+L

LEFT SIDE		RIGHT SIDE	
10X OBJ.	0 mm (i.e. FOCUSED INITIALLY)	10X OBJ.	0 mm
6X OBJ.	mm	6X OBJ.	mm
3.5X OBJ.	mm	3.5X OBJ.	mm



WILD

LEFT SIDE		RIGHT SIDE	
10X OBJ.	0 μm	10X OBJ.	0 μm
6X OBJ.	+ 13. μm	6X OBJ.	+ 57 μm
3X OBJ.	+ 116 μm	3X OBJ.	+ 225 μm

64 21 21 96

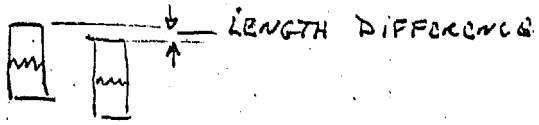
13. PARCENTRATION OF OBJECTIVES IN EYEPIECE FOCAL PLANE (ONLY THE WILD OBJECTIVES MADE PARCENTRAL)

WILD

LEFT SIDE		RIGHT SIDE	
10X OBJ.	CENTERED	10X OBJ.	CENTERED
6X OBJ.	.1 mm FROM CENTER	6X OBJ.	.2 mm FROM CENTER
3X OBJ.	.1 mm " "	3X OBJ.	.2 mm " "

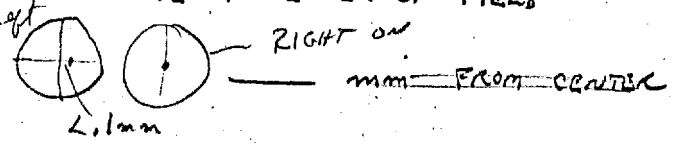
14. DIFFERENCE IN EYEPIECE LENGTHS WHEN AT NOMINAL SETTING (USE DIOPTER TELESCOPE SET AT ZERO)

LEFT 125 mm
RIGHT 125 mm
DIFFERENCE 0 mm



15. POSITION OF RETICLE RELATIVE TO CENTER OF FIELD

(SKETCH)



16. FOCUS RANGE OF EYEPIECES (NOMINAL ZERO SETTING AT WHITE RING OF EYEPIECE TUBE)

LEFT SIDE	RIGHT SIDE
+ at least 5 DIOPTERS	+ at least 5 DIOPTERS
- at least 5 DIOPTERS	- at least 5 DIOPTERS

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17. WEIGHT _____ POUNDS

18. EYE RELIEF 10X EYEPIECES & OBJECTIVES

	LEFT SIDE	RIGHT SIDE
B+L	_____ mm	_____ mm
WILD	14 mm	14 mm

TESTS CONDUCTED BY

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INSTRUMENT CHECK OUT DATE 6/30/65

HIGH POWER STEREO VIEWER COMPARATOR HEAD SERIAL NO. 352 UA

1. INTERPUPILLIARY DISTANCE

NOMINAL	ACTUAL
55 - 72 mm	54 - 73 mm

2. VERIFY OPERATION OF MECHANICAL CONTROLS

	ACCEPT	REJECT
A. ZOOM CONTROL KNOBS	✓	
B. PECHAN ROTATION	✓	
C. ANGLE TRANSFER SCALES	✓	
D. EYEPIECE INCLINATION CLAMP	✓	
E. EYEPIECE ROTATION	✓	
F. RETICLE RETRACTION	✓	
G. IPD LEVER	✓	
H. EYEPIECE FOCUS RINGS	✓	

COMMENTS:

3. EYEPIECE INCLINATION

NOMINAL	ACTUAL
30° ± 7.5°	

4. MAGNIFICATION

	NOMINAL	LEFT SIDE ACTUAL	RIGHT SIDE ACTUAL
B+L 10X EYEPIECES + B+L 10X OBJECTIVES	100X	105X	106.5X
	200X	216X	214X
B+L 6X OBJECTIVES	60X	X	X
	120X	X	X
B+L 3.5X OBJECTIVES	35X	X	X
	70X	X	X
WILD 10X EYEPIECES + 10X WILD OBJECTIVE	100X	106X	108X
	200X	217X	217X

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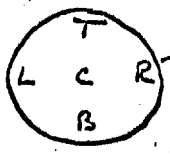
4. MAGNIFICATION (CONT)

	NOMINAL	LEFT ACTUAL	RIGHT ACTUAL
6X WILD OBJECTIVES	60X	64.1 X	63.7 X
	120X	131 X	130 X
3X WILD OBJECTIVES	30X	32.1 X	30.7 X
	60X	65.8 X	62.5 X

5. RESOLUTION (NO REFOCUSING)



FIELD TARGET NBS R 0064 200 - 2000 l/mm

LEFT SIDE l/mm

B&L OPTICS	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	900	500	640	500	640
200X	900	560	720	560	720

RIGHT SIDE l/mm

	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	800	400	400	440	360
200X	900	560	560	560	560

Serial #	WILD OPTICS	C	T	B	R	L
	30X	320	<200	<200	<200	<200
1767	60X	360	200	<200	<200	<200
0985	60X	500	360	320	360	220
	120X	640	440	440	400	440
	100X	900	640	560	640	640
3162	200X	1120	900	900	900	900

Serial #		C	T	B	R	L
11773	30X	280	<200	<200	<200	<200
	60X	320	<200	<200	<200	<200
10968	60X	640	320	280	220	220
	120X	900	440	400	280	320
103025	100X	900	500	500	500	440
	200X	1120	640	640	560	720

COMMENTS: Resolution Block
800
900
1000
1120

Both sagittal and tangential lines change focus

6. COMPENSATION FOR IMAGE ROTATION DUE TO EYEPIECE INCLINATION (SET AT 30°)

	LEFT SIDE		RIGHT SIDE	
22.5°	ACCEPT ✓	REJECT ___	ACCEPT ___	REJECT ___
37.5°	ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___

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HPSV COMPARATOR HEAD SERIAL # 52 UA

7. COINCIDENCE OF RETICLE WITH IMAGERY THROUGH ZOOM RANGE
USE DIOPTER TELESCOPE 10X EYEPIECE AND
LEFT & RIGHT

B+L	10X	OBJECTIVE	ACCEPT ____	REJECT ____
	6X	"	ACCEPT ____	REJECT ____
	3.5X	"	ACCEPT ____	REJECT ____
WILD	10X	"	ACCEPT ✓	REJECT ____
	6X	"	ACCEPT ✓	REJECT ____
	3X	"	ACCEPT ✓	REJECT ____

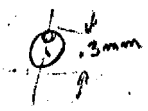
8. PECHAN ZERO SETTING

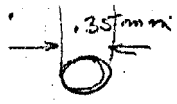
LEFT SIDE		RIGHT SIDE	
ACCEPT ✓	REJECT ____	ACCEPT ✓	REJECT ____

9. PECHAN RUNOUT - IN EYEPIECE FOCAL PLANE 10X EYEPIECE

LEFT SIDE			RIGHT SIDE		
B+L	10X OBJ	.3 mm	10X OBJ	.35	mm
	6X "	____ mm	6X "	____	mm
	3.5X "	____ mm	3.5X "	____	mm

RUNOUT LOOKS LIKE (SKETCH)





WILD	10X	____ mm	10X	____	mm
	6X	____ mm	6X	____	mm
	3.5X	____ mm	3.5X	____	mm

RUNOUT LOOKS LIKE (SKETCH)

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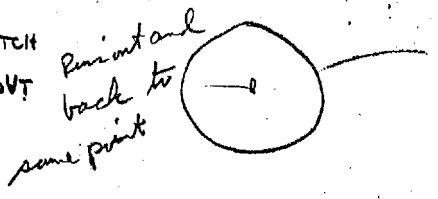
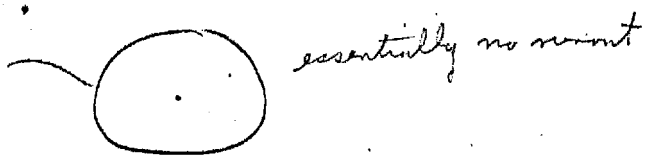
HPSU COMPARATOR HEAD SERIAL # 358 VA

10. ZOOM RUNOUT IN EYEPIECE FOCAL PLANE 100X – 200X

	LEFT SIDE	RIGHT SIDE
B+L	~.02 mm	~.02 mm
WILD	____ mm	____ mm

SKETCH RUNOUT





11. FIELD OF VIEW 10X EYEPIECES

		LEFT SIDE	RIGHT SIDE
B+L	100X	1.82 mm	1.82 mm
	200X	0.91 mm	0.91 mm
	60X	____ mm	____ mm
	120X	____ mm	____ mm
	35X	____ mm	____ mm
	70X	____ mm	____ mm
WILD	100X	1.82 mm	1.81 mm
	200X	0.91 mm	0.9 mm
	60X	3.06 mm	3.02 mm
	120X	1.51 mm	1.5 mm
	30X	6.22 mm	6.35 mm
	60X	3.01 mm	3.1 mm

COMMENTS:

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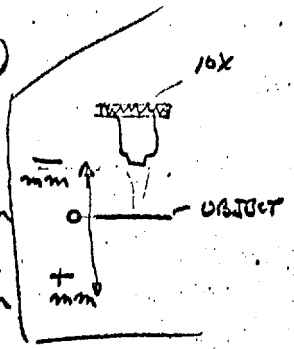
HPSU COMPARATOR HEAD SERIAL # 352

12. PARFOCALITY OF OBJECTIVES (USE DIOPTER TELESCOPE)



	LEFT SIDE (i.e. FOCUSED INITIALLY)		RIGHT SIDE	
B+L	10X OBJ.	0 mm	10X OBJ.	0 mm
	6X OBJ.	mm	6X OBJ.	mm
	3.5X OBJ.	mm	3.5X OBJ.	mm
WILD	10X OBJ.	0 μ	10X OBJ.	0 mm
	6X OBJ.	+45 μ	6X OBJ.	+2 mm
	3X OBJ.	+84 μ	3X OBJ.	+124 mm

13. PARCENTRATION OF OBJECTIVES IN EYEPIECE FOCAL PLANE (ONLY THE WILD OBJECTIVES MADE PARCENTRAL)

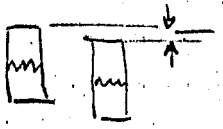
	LEFT SIDE		RIGHT SIDE	
WILD	10X OBJ.	CENTERED	10X OBJ.	CENTERED
	6X OBJ.	.25 mm FROM CENTER	6X OBJ.	.15 mm FROM CENTER
	3X OBJ.	.1 mm " "	3X OBJ.	.15 mm " "

14. DIFFERENCE IN EYEPIECE LENGTHS WHEN AT NOMINAL SETTING (USE DIOPTER TELESCOPE SET AT ZERO)

LEFT 130 mm

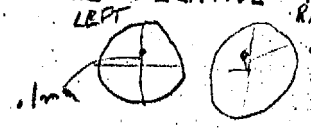
RIGHT 129 mm

DIFFERENCE 1.0 mm



15. POSITION OF RETICLE RELATIVE TO CENTER OF FIELD

(SKETCH)



____ mm FROM CENTER

16. FOCUS RANGE OF EYEPIECES (NOMINAL ZERO SETTING AT WHITE RING OF EYEPIECE TUBE)

LEFT SIDE	RIGHT SIDE
+ at least 5 DIOPTERS	+ at least 5 DIOPTERS
- at least 5 DIOPTERS	- at least 5 DIOPTERS

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HPSU COMPARATOR HEAD SERIAL # 334 UH

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17. WEIGHT _____ POUNDS

18. Eye Relief 10X EYEPIECES + OBJECTIVES

	LEFT	RIGHT
B+L	_____ mm	_____ mm
WILD	14 mm	15 mm

TESTS CONDUCTED BY

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INSTRUMENT CHECK OUT DATE 7/1/65

HIGH POWER STEREO VIEWER COMPARATOR HEAD SERIAL NO. 353 UA

1. INTER PUPILLIARY DISTANCE

NOMINAL	ACTUAL
55 - 72 mm	54 - 73 mm

2. VERIFY OPERATION OF MECHANICAL CONTROLS

	ACCEPT	REJECT
A. ZOOM CONTROL KNOBS	✓	
B. PECHAN ROTATION	✓	
C. ANGLE TRANSFER SCALES	✓	
D. EYEPIECE INCLINATION CLAMP	✓	
E. EYEPIECE ROTATION	✓	
F. RETICLE RETRACTION	✓	
G. IPD LEVER	✓	
H. EYEPIECE FOCUS RINGS	✓	

COMMENTS:

3. EYEPIECE INCLINATION

NOMINAL	ACTUAL
30° ± 7.5°	

4. MAGNIFICATION

	NOMINAL	LEFT SIDE ACTUAL	RIGHT SIDE ACTUAL
10X B+L EYEPIECES + 10X B+L OBJECTIVES	100X	105.5X	105.5 X
	200X	216 X	215 X
6X B+L OBJECTIVES	60X	X	X
	120X	X	X
3.5X B+L OBJECTIVES	35X	X	X
	70X	X	X
10X WILD EYEPIECES + 10X WILD OBJECTIVE	100X	106 X	106 X
	200X	217 X	216 X

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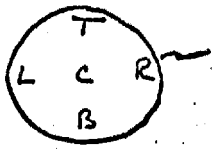
4. MAGNIFICATION (BOTH)

	NOMINAL	LEFT	RIGHT ACTUAL
6X WILD OBJECTIVES	60X	65 X	63.7 X
	120X	132.5 X	122 X
3X WILD OBJECTIVES	30X	32 X	32.6 X
	60X	65.5 X	66.5 X

5. RESOLUTION (NO REFOCUSING)



FIELD

TARGET NBS ROOKY 200 - 2000 l/mm

LEFT SIDE l/mm

B&L OPTICS	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	800	440	440	500	500
200X	800	720	640	560	640

RIGHT SIDE l/mm

	C	T	B	R	L
35X					
70X					
60X					
120X					
100X	800	440	500	400	320
200X	800	640	640	720	720

Serial #	WILD OPTICS	C	T	B	R	L
9759	30X	320	<200	<200	<200	<200
	60X	360	<200	<200	<200	200
10984	60X	640	400	400	320	360
	120X	900	640	560	360	440
12656	100X	1000	640	560	560	560
	200X	1120	900	800	900	900

Serial #		C	T	B	R	L
11761	30X	320	<200	<200	<200	<200
	60X	360	<200	<200	<200	<200
10936	60X	720	360	320	320	320
	120X	900	440	560	400	400
103105	100X	1000	800	640	640	640
	200X	1260	900	900	900	900

COMMENTS: 800 900 1000 1120 1260

Both sagittal + tangential lines show focus

6. COMPENSATION FOR IMAGE ROTATION DUE TO EYEPIECE INCLINATION (SET AT 30°)

	LEFT SIDE		RIGHT SIDE	
22.5°	ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___
37.5°	ACCEPT ✓	REJECT ___	ACCEPT ✓	REJECT ___

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HPSV [redacted] HEAD SERIAL # [redacted]

7. COINCIDENCE OF RETICLE WITH IMAGERY THROUGH ZOOM RANGE
USE DIOPTOR TELESCOPE 10X EYEPIECE AND
LEFT & RIGHT

			ACCEPT	REJECT
B+L	10X	OBJECTIVE	ACCEPT	REJECT
	6X	"	ACCEPT	REJECT
	3.5X	"		

Left Right

			ACCEPT	REJECT
WILD	10X	"	ACCEPT	REJECT
	6X	"	ACCEPT	REJECT
	3X	"		

8. PECHAN ZERO SETTING

LEFT SIDE
ACCEPT ✓ REJECT ____

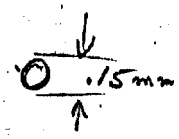
RIGHT SIDE
ACCEPT ✓ REJECT ____

9. PECHAN RUNOUT IN EYEPIECE FOCAL PLANE 10X EYEPIECE

LEFT SIDE

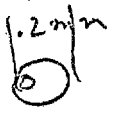
B+L	10X OBJ	.15	mm
	6X "		mm
	3.5X "		mm

RUNOUT LOOKS LIKE (SKETCH)



RIGHT SIDE

10X OBJ	.2mm	mm
6X "		mm
3.5X "		mm



WILD	10X		mm
	6X		mm
	3.5X		mm

RUNOUT LOOKS LIKE (SKETCH)

10X		mm
6X		mm
3.5X		mm

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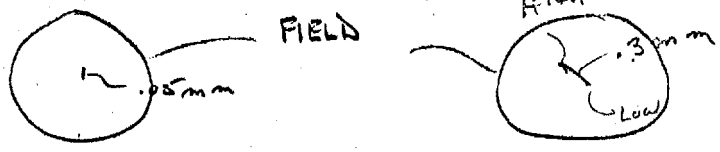
HPSU COMPARATOR HEAD SERIAL # 353

10. ZOOM RUNOUT IN EYEPIECE FOCAL PLANE 100X – 200X

	LEFT SIDE	RIGHT SIDE
B&L	.05 mm	.3mm mm
WILD	____ mm	____ mm

SKETCH RUNOUT



11. FIELD OF VIEW 10X EYEPIECES

		LEFT SIDE		RIGHT SIDE
B&L	100X	1.78 mm	100X	1.90 mm
	200X	0.89 mm	200X	0.94 mm
	60X	____ mm	60X	____ mm
	120X	____ mm	120X	____ mm
	35X	____ mm	35X	____ mm
	70X	____ mm	70X	____ mm
WILD	100X	1.80 mm	100X	1.80 mm
	200X	0.90 mm	200X	0.91 mm
	60X	2.98 mm	60X	3.02 mm
	120X	1.48 mm	120X	1.50 mm
	30X	6.12 mm	30X	6.05 mm
	60X	3.01 mm	60X	3.0 mm

COMMENTS:

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HPSU COMPARATOR HEAD SERIAL #

12. PARFOCALITY OF OBJECTIVES (USE DIOPTER TELESCOPE)

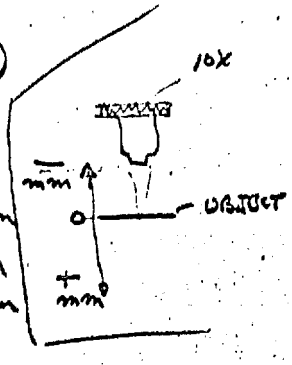
B&L

LEFT SIDE (i.e. FOCUSED INITIALLY)

10X OBJ.	0	mm
6X OBJ.		mm
3.5X OBJ.		mm

RIGHT SIDE

10X OBJ.	0	mm
6X OBJ.		mm
3.5X OBJ.		mm



WILD

LEFT SIDE

10X OBJ.	0	mm
6X OBJ.	19	mm
3X OBJ.	95	mm

RIGHT SIDE

10X OBJ.	0	mm
6X OBJ.	6	mm
3X OBJ.	107	mm

13. PARCENTRATION OF OBJECTIVES IN EYEPIECE FOCAL PLANE (ONLY THE WILD OBJECTIVES MADE PAR CENTRAL)

WILD

LEFT SIDE

10X OBJ.	CENTERED	
6X OBJ.	.05	mm FROM CENTER
3X OBJ.	.20	mm " "

RIGHT SIDE

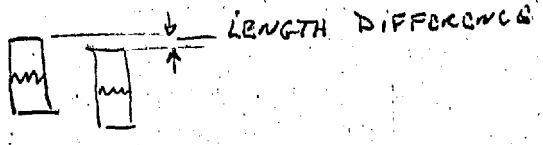
10X OBJ.	CENTERED	
6X OBJ	.15	mm FROM CENTER
3X OBJ.	.20	mm " "

14. DIFFERENCE IN EYEPIECE LENGTHS WHEN AT NOMINAL SETTING (USE DIOPTER TELESCOPE SET AT ZERO)

LEFT 129 mm

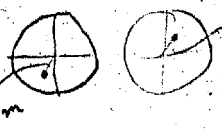
RIGHT 127.5 mm

DIFFERENCE 1.5 mm



15. POSITION OF RETICLE RELATIVE TO CENTER OF FIELD

(SKETCH)



____ mm FROM CENTER

16. FOCUS RANGE OF EYEPIECES (NOMINAL ZERO SETTING AT WHITE RING OF EYEPIECE TUBE)

LEFT SIDE

+ at least 5 DIOPTERS

- at least 5 DIOPTERS

RIGHT SIDE

+ at least 5 DIOPTERS

- at least 5 DIOPTERS

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17. WEIGHT _____ POUNDS

18. EYE RELIEF LEFT RIGHT

B&L _____ mm _____ mm

WILD 15 mm 14 mm

TESTS CONDUCTED BY

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